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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/825,345	04/15/2004	**Shannon V. Davidson**	064747.1011	8660

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EXAMINER	
DAFTUAR, SAKET K	
ART UNIT	**PAPER NUMBER**
2451	

NOTIFICATION DATE	DELIVERY MODE
03/19/2010	ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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Office Action Summary	Application No.	Applicant(s)	
	10/825,345	DAVIDSON ET AL.	
	Examiner	Art Unit	
	SAKET K. DAFTUAR	2451	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *16 December 2009*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-45* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-45* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date *02/17/10, 01/27/10, 10/20/09, 09/11/09*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

Response to Amendment

1. Applicant's submission filed on December 16th, 2009 has been entered. Claims 1-45 are presented for the further examination.

Response to Arguments

2. Applicant's arguments filed on December 16th, 2009 have been fully considered but they are not persuasive. As per arguments filed on December 16th, 2009 applicant argues to the substance that:

a. The rejection is improper because the proposed modification in view of Marsh would render Brownell and Aziz unsatisfactory for their intended purposes. The proposed combination fails to teach, suggest, or disclose "resetting a boot image of the selected node based at least in part on the retrieved policy" that is "associated with the distributed application" and "associating a virtual disk image with the selected node based at least in part on the retrieved policy."

In response to applicant's argument a), the applicant arguments with respect to Marsh, Brownell and Aziz would result unsatisfactory and improper result is not persuasive as the arguments presented by applicant s are directed to different analysis that are clearly different than what the examiner has issued in previous office action. Examiner would like to point out that the clarification with respect to applicant arguments with respect to subject matter "resetting a boot image of the selected node based at least in part on the retrieved policy"

that is "associated with the distributed application " is been received by the office and applicant clarifies that applicant arguments “resetting a boot image of the selected node based at least in part on the retrieved policy” are directed to policy being associated with distributed application, hence, the combination of Brownell, Marsh and Aziz teaches such association. See the discussion below:

Applicant continues to argue that cited prior arts fail to teach “associating a virtual disk image with the selected node based at least in part on the retrieved policy”, examiner considers the following claim interpretation where the combination of cited prior art teaches such disclosure.

In response to applicant's argument examiner consider the following Brownell disclosure:

> “A platform and method of deploying virtual processing areas networks are described. A plurality of computer processors are connected to an internal communication network. At least one control node is in communication with an external communication network and an external storage network has an external storage address space. The at least one control node is connected to the internal network and thereby is in communication with the plurality of computer processors. Configuration logic defines and establishes a virtual processing area network having a corresponding set of computer processors from the plurality of processors, a virtual local area communication network providing communication among the set of computer processors, and a virtual storage space with a

defined correspondence to the address space of the storage network."

(see abstract).

As such examiner considers, Brownell discloses selecting a distributed application (see column 2, lines 47-62); dynamically selecting one of a plurality of nodes(see column 2, line 47- column 3, line 8); associating a virtual disk image with the selected node based (see column 2, line 47- column 3, line 26, examiner considers "The virtualization may include virtualization of local area networks (LANs) or the virtualization of I/O storage" and "Each control node 120 is a single board that includes one or more (e.g., 4) processors, local memory, and local disk storage for holding independent copies of the boot image and initial file system that is used to boot operating system software for the processing nodes 105 and for the control nodes 106."see figure 1), at least in part; and executing at least a portion of the distributed application on the selected node as reset using the virtual disk image associated with the selected node (see column 2, line 47- column 3, line 26) the execution performed by at least one processor of the selected node (see figure1, column 2, line 45 – column 3, line 67, column 5, line 45 – column 6, line 38).

However, Brownell is silent about the policy associated with the distributed application and resetting a boot image of the selected node, the boot image being compatible with the distributed application.

Examiner considers the following teaching from Marsh reference where Marsh discloses

Marsh is directed to system and method for updating firmware that uses a software application operable under a current firmware/operating system configuration to install a new firmware version without "compromising" the operating system are presented. The software application may configure a computer system to install a plurality of software fixes configured to enhance functionality under a new firmware/operating system environment after the firmware has been successfully upgraded… In addition, the software application may configure the computing device to "boot" under the new firmware/operating system environment upon subsequent system initializations…" (See title and Abstract).

As such, examiner considers that Marsh teaches resetting a boot image [examiner considers rebooting the device] of the selected node, the boot image being compatible with the distributed application (see column 2, line 57 – column 3, line 48, column 6, line 15 – column 8, line 13, column 8, line 39 – column 10, line 30, see figures 2-4, 6, examiner considers "a software application … configure the computing device to "boot" under the new firmware/operating system environment upon subsequent system initializations" and further teaches "After the fixed storage device stores the modified boot image, which may be delivered along with its own set of boot instructions, the fixed storage device or "boot" disk may be configured to apply the modified boot image and boot instructions upon the next microprocessor boot request. The boot image may comprise a complete copy of the present firmware installed on the computer

system, as well as, a copy of the new firmware, an install application, and a flash application").

Aziz, on the other hand, teaches that policy associated with the distributed application for the plurality of processors and storage disks in distributed network (see column 11, lines 7-15; column 19, line 44 – column 21, line 17, see figures 14-16, examiner considers Azis is directd to a "controlling an extensible computing system" in a Virtual Server Farm and performs controlling computing elements according to policy rules "single control plane computing element must be capable of manifesting itself in multiple VSFs simultaneously, while enforcing firewalling between the VSFs according to policy rules established for each control plane. Policy rules may be stored in database 914 (FIG. 9) of each control plane or implemented by central segment manager 1302 (FIG. 13)").

> Aziz is directed to method and apparatus for controlling an extensible computing system that includes a Virtual Server Farm (VSF) is created out of a wide scale computing fabric ("Computing Grid") which is physically constructed once and then logically divided up into VSFs for various organizations on demand. Allocation and control of the elements in the VSF is performed by a control plane connected to all computing, networking, and storage elements in the computing grid through special control ports. The control plane is comprised of a control mechanism hierarchy that includes one or more master control process mechanisms communicatively coupled to one or more slave control process mechanisms. The one or more master control process mechanisms

instruct the slave control process mechanisms to establish VSFs by selecting subsets of processing and storage resources.

Therefore, the person skilled in the art would clearly recognizes Brownell, Marsh, and Aziz are from same field endeavor as they all are directed to processing and managing of computing system. As such no unsatisfactory result or improper result would be constructed when all cited prior arts are directed to same field endeavor and one having ordinary skilled in the art would be motivated to combine the teachings of Aziz, Marsh with Brownell to provide a computer platform includes a plurality of computer processors connected to a communication network that provides an highly scalable controlling and managing storage devices coupled to storage networks or switches and provides an highly scalable computing system that supports creation of multiple segregated processing nodes whereas each processing nodes comprise a fixed storage device containing a boot image configured with an appropriate code or instruction to execute data necessary to perform firmware upgrade and installation.

Information Disclosure Statement

3. The all information disclosure statement (IDS) submitted by 02/17/2010 is being considered by the examiner.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

5. Claims 1-45 are rejected under 35 U.S.C. 103(a) as being unpatentable over Brownell et al. US Patent Number 7,231,430 B2 (hereinafter Brownell) and Aziz et al. US Patent Number 6,597,956 B1 (hereinafter Aziz) and further in view of Marsh et al. US Patent Number 7,055,148 B2 (hereinafter Marsh).

As per claim 1, Brownell discloses selecting a distributed application (see column 2, lines 47-62); dynamically selecting one of a plurality of nodes(see column 2, line 47- column 3, line 8); associating a virtual disk image with the selected node based (see column 2, line 47-column 3, line 26, examiner considers "The virtualization may include virtualization of local area networks (LANs) or the virtualization of I/O storage" and "Each control node 120 is a single board that includes one or more (e.g., 4) processors, local memory, and local disk storage for holding independent copies of the boot image and initial file system that is used to boot operating system software for the processing nodes 105 and for the control nodes 106."see figure 1), at least in part; and executing at least a portion of the distributed application on the selected node as reset using

the virtual disk image associated with the selected node (see column 2, line 47- column 3, line 26) the execution performed by at least one processor of the selected node (see figure1, column 2, line 45 – column 3, line 67, column 5, line 45 – column 6, line 38).

However, Brownell is silent about the policy associated with the distributed application and resetting a boot image of the selected node, the boot image being compatible with the distributed application.

Marsh teaches resetting a boot image [examiner considers rebooting the device] of the selected node, the boot image being compatible with the distributed application (see column 2, line 57 – column 3, line 48, column 6, line 15 – column 8, line 13, column 8, line 39 – column 10, line 30, see figures 2-4, 6, examiner considers "a software application ... configure the computing device to "boot" under the new firmware/operating system environment upon subsequent system initializations" and further teaches “After the fixed storage device stores the modified boot image, which may be delivered along with its own set of boot instructions, the fixed storage device or "boot" disk may be configured to apply the modified boot image and boot instructions upon the next microprocessor boot request. The boot image may comprise a complete copy of the present firmware installed on the computer system, as well as, a copy of the new firmware, an install application, and a flash application”).

Aziz, on the other hand, teaches that policy associated with the distributed application for the plurality of processors and storage disks in distributed network (see column 11, lines 7-15; column 19, line 44 – column 21, line 17, see figures 14-16, examiner considers Azis is directd to a "controlling an extensible computing system" in a Virtual Server Farm and performs controlling computing elements according to policy rules "single control plane computing element must be capable of manifesting itself in multiple VSFs simultaneously, while enforcing firewalling between the VSFs according to policy rules established for each control plane. Policy rules may be stored in database 914 (FIG. 9) of each control plane or implemented by central segment manager 1302 (FIG. 13)").

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to combine the teachings of Aziz, Marsh with Brownell to provide a computer platform includes a plurality of computer processors connected to a communication network that provides an highly scalable controlling and managing storage devices coupled to storage networks or switches and provides an highly scalable computing system that supports creation of multiple segregated processing nodes whereas each processing nodes comprise a fixed storage device containing a boot image configured with an appropriate code or instruction to execute data necessary to perform firmware upgrade and installation.

As per claim 2, Brownell discloses comparing the subset of nodes with the retrieved policy (see column 2, line 47- column 3, line 26, column 8, lines 34-51 locally configured IP address containing MAC address); and Marsh teaches selecting one of a plurality of compatible boot images based on the comparison(see column 2, line 57 – column 3, line 48, column 6, line 15 – column 8, line 13, column 8, line 39 – column 10, line 30, see figures 2-4, 6).

As per claim 3, Brownell discloses determining a count of nodes in the subset (see column 2, line 47- column 3, line 26, column 8, lines 34-51, column 14, lines 39-49); and Marsh teaches selecting the boot image based on a link in the policy and the count of nodes (see column 2, line 57 – column 3, line 48, column 6, line 15 – column 8, line 13, column 8, line 39 – column 10, line 30, see figures 2-4, 6).

As per claim 4, Marsh teaches the subset of nodes associated with one of the plurality of compatible boot images (see column 2, line 57 – column 3, line 48, column 6, line 15 – column 8, line 13, column 8, line 39 – column 10, line 30, see figures 2-4, 6).

As per claim 5, Brownell discloses determining if one or more of the plurality of nodes is unutilized by a second distributed application (see column 7,line 29 – column 8, line 51; internal nodes utilization is unavailable to external node); and in response to at least one of the nodes being unutilized, selecting one of the unutilized nodes(see column 7,line 29 – column 8, line 51).

As per claim 6, Brownell compatibility of the selected node with the selected distributed application (see column 7,line 29 – column 8, line 51) and Aziz teaches the policy (see column 11, lines 7-15; column 19, line 44 – column 21, line 17).

As per claim 7, Marsh teaches automatically shutting down the selected node (see column 2, line 57 – column 3, line 48, column 6, line 15 – column 8, line 13, column 8, line 39 – column 10, line 30, see figures 2-4, 6); resetting the boot image of the selected node (see column 2, line 57 – column 3, line 48, column 6, line 15 – column 8, line 13, column 8, line 39 – column 10, line 30, see figures 2-4, 6);and restarting the selected node using the reset boot image (see column 2, line 57 – column 3, line 48, column 6, line 15 – column 8, line 13, column 8, line 39 – column 10, line 30, see figures 2-4, 6).

As per claim 8, Brownell discloses terminating any processes associated with the second distributed application prior to shutting down the node (see column 2, line 47- column 3, line 26, column 6, lines 18-35, column 9, line 54 – column 10,line 28).

As per claim 9, Marsh teaches a plurality of links to boot images, each link associated with one of a count of nodes compatible with the distributed application (see column 2, line 57 – column 3, line 48, column 6, line 15 – column 8, line 13, column 8, line 39 – column 10, line 30, see figures 2-4, 6).

As per claim 10, Brownell discloses one or more parameters for determining the timing of the selection of the node (column 27, lines 30-32) .

As per claim 11, Brownell discloses a remote boot image stored in a Storage Area Network (SAN) (column 2, line 45 – column 3, line 26).

As per claim 12, Marsh teaches the node associated with a first boot image prior to the reset and associated with a second boot image from the reset, the first and second boot image differing in at least one of the following characteristics: operating system; system configuration and distributed application parameters (see column 2, line 57 – column 3, line 48, column 6, line 15 – column 8, line 13, column 8, line 39 – column 10, line 30, see figures 2-4, 6).

As per claim 13, Brownell discloses determining that one of the plurality of nodes failed, the failed node executing at least a portion of the selected distributed application (see column 2, line 47- column 3, line 26, column 6, lines 18-35, column 9, line 54 – column 10,line 28); and wherein selecting one of the plurality of nodes comprises selecting one of the remaining nodes in response to the failure (see column 2, line 47-column 3, line 26, column 6, lines 18-35, column 9, line 54 – column 10,line 28).

As per claim 14, Brownell discloses the same processor architecture (column 5, lines 29-34).

As per claim 15, Brownell discloses selecting one of the plurality of nodes at a predetermined time column 27, lines 30-32).

As per claims 16-30 and 31-45, they do not teach or further definer over the limitation as recited in claims 1-15, Brownell discloses therefore, claims 16-45 are rejected under same scope as discussed in claims 1-15, supra.

Conclusion

6. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

b. Merging Scalable Nodes into Single-Partition Merged System Using Service Processors of Nodes by Zaharias US Patent Number 7,379,983 B2.

c. Mechanism for Controlling Boot Decisions from a Network Policy Directory Based on Client Profile Information by Backman et al. US Patent Number 7,127,597 B2.

7. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory

action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Contact Information

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Saket K. Daftuar whose telephone number is 571-272-8363. The examiner can normally be reached on 8:30am-5:00pm M-W.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John Follansbee can be reached on 571-272-3964. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/S. K. D./

Examiner, Art Unit 2451

/John Follansbee/

Supervisory Patent Examiner, Art Unit 2451